

REMARKS

Claims 1, 22, 23, 26, 27, 29-36 and 38-42 are presented for further examination. Specifically, claims 21, 24 and 25 are cancelled and their features are incorporated into claim 1. Claims 22, 23 and 26, which depend from the cancelled claims, are made dependent from amended claim 1. In claim 26, redundant expressions are removed. Claims 28 and 37 are cancelled. Minor modifications are made to claims 31 and 35. The amendment to claim 31 is a minor correction to make it consistent with the specification, page 24 line 5 and the amendment to claim 35 is to provide a missing word to make the recitation consistent with the amended claim 1, which recites a cut surface on the side of the upper blade including an irregular raised and depressed pattern. The other claims, i.e., claims 27, 29, 30, 32-34, 36 and 38-42 are previously presented claims.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

In the Office Action mailed on July 7, 2006, the Examiner raised rejections against claims 1 and 21-42 under 35 U.S.C. 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious by Sakai et al (U.S. Patent No. 5,423,239) or Murao et al (U.S. Patent No. 5,827,599). In addition, the Examiner raised rejections against claims 1, 21-27, 29-36 and 38-42 under 35 U.S.C. 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious by Iida et al (U.S. Patent No. 6,627,334) or Kasuga (JA 09-153212 or JA 11-296839). Regarding claims 28 and 37, the Examiner raised rejection under 35 U.S.C. 103(a) as being unpatentable over Iida et al and Kasuga as applied to claims 1 and 21-27, 29-36 and 38-42 and further in view of either Sakai et al or Murao et al. Further, regarding claims 1 and 21-42, the Examiner raised judicially created obviousness type double patenting rejection over claims 1 and 2 of copending Application No. 10/802,134. Finally, the Examiner raised the same rejection against the same claims over claims 1-11 of U.S. Patent No. 7,045,228. Here, we note that a patent identified as "US 70045228" in the Detailed Action should read "U.S. Patent No. 7,045,228" as found in the Notice of References Cited attached to the outstanding Office Action.

In response to the outstanding Office Action, the applicant amends pending set of claims as described above. We respectfully disagree with the basis for the rejection and request reconsideration and further examination.

I. The key feature of the present invention

First, we would like to explain the key features as claimed by currently amended claim 1. As found in amended claim 1, there is a relative ratio of the broken region in the cut surface on the side of the lower blade of 40 to 65% (claims 1 and 32) or preferably of 50 to 60% (claims 26 and 34). These features are part of the inventive claim 1 based on the mechanism of the cutting of the media. The cut is actually caused by a shearing force and a braking force. More specifically, the relative ratio of the broken region has close relationship with the size of an irregular raised and depressed pattern of the cut surface. See the specification, page 26, line 10 through page 27, line 8. The relative ratio of the broken region influences the amount of the peeled and/or dropped part of the broken surface of the recording medium. See the specification, page 28, line 20 through page 29, line 9. Based on these technical findings and associated detailed experiment as disclosed in the specification as Working Examples 1 and 2, the numerical limitation with respect to the ratio of the broken region in the cut surface is claimed.

Regarding the shape of the raised and depressed pattern, the cited references may disclose a raised and depressed pattern of the cut surface that is similar to the present invention in view of the shape. However, what cited references disclose is just a shape that is seemingly similar to the irregular raised and depressed pattern of the present invention, thus, it is clear that they do not disclose the limitation to the ratio of the broken region. Moreover, since the above-mentioned technical teachings by the present inventors are not disclosed in any of the cited references, they never teach nor suggest the limitation of the ratio of the broken region. Therefore, we do not believe that the invention of claim 1 could have been easily done by those skilled in the art based on the cited references. If any numerical limitation to the ratio of the broken region in the cut surface is attempted to be read from the cited references, they clearly fail to teach or suggest the close relationship between the relative ratio of the broken region and the size of an irregular raised and depressed pattern or the influence of the relative ratio of the

broken region to the amount of the peeled and/or dropped part of the broken surface, there should be an impermissible hindsight.

Next, we will address each rejection in order they are presented. The numeral in each heading denotes paragraph numeral given in the outstanding Office Action.

II. Rejections under 35 U.S.C. § 102 or § 103

*5. Claims 1 and 21-42 rejection under 35 U.S.C. 102(a) over Sakai et al*

Sakai et al (U.S. Patent No. 5,423,239, hereinafter “Sakai”) discloses the preferable percentage of a gap (gap C in Fig. 2) between an upper blade and a lower blade with relative to the thickness of the magnetic tape. However, it is clear that Sakai fails to disclose the limitation of the broken region. In addition, Sakai also does not teach or suggest this limitation, because Sakai fails to refer any mechanism relating to the breaking force. Therefore, we do not believe that Sakai discloses or suggests the present claim 1.

*Claims 1 and 21-42 rejection under 35 U.S.C. 102(a) over Murao et al*

Murao et al (U.S. Patent No. 5,827,599, “Murao”) discloses how an edge face of a back layer should be determined with respect to a vertical line tangent to the highest protrusion on a slit section (*i.e.*, if the back layer should be protrude from the vertical line or not). However, it is clear that Murao fails to disclose the limitation of the broken region. In addition, Murao also does not teach or suggest this limitation, because Murao fails to refer any mechanism relating to the breaking force. Therefore, we do not believe that Murao discloses or suggests the present invention.

*6. Claims 1, 21-27, 29-36 and 38-42 rejection under 35 U.S.C. 102(a) over Iida et al, and Claims 1, 21-27, 29-36 and 38-42 rejection under 35 U.S.C. 102(a) over Kasuga I*

Iida et al (U.S. Patent No. 6,627,334, “Iida”) discloses the same point as in Murao. Likewise, Kasuga (JA 09-153212 or JA 11-296839, “Kasuga”) discloses the same point as in Murao. Therefore, we do not believe that Iida or Kasuga discloses or suggests the amended claim 1.

*7. Claims 28 and 37 rejection under 35 U.S.C. 103(a)*

The applicant cancels claims 28 and 37.

III. Double patenting rejections

*9. Claims 1 and 21-42 rejection under judicially created doctrine of obviousness-type double patenting over copending Application No. 10/802,134*

The double patenting rejection against claims 1 and 21-41 over claims 1 and 2 of copending Application No. 10/802,134 should be a provisional rejection as of the date of this response, because the copending application is not matured as a patent. Since the present application has a filing date of March 1, 2004, which is earlier than that for the copending application, March 16, 2004, we understand that the double patenting rejection against claim 1 and 21-41 over claims of the copending application has been made based on a practice specified in MPEP 804 I.B, second paragraph. We also understand that, if the double patenting rejection becomes the only rejection in the present application with relative to the cited copending application, the double patenting rejection should be withdrawn without requiring a terminal disclaimer for the present application. MPEP 804 I.B.1, first paragraph. Therefore we refrain from submitting a terminal disclaimer for the present case at this time.

Please be informed that in the course of response to the Office Action mailed on May 17, 2006 against the copending application, we filed an amendment to claims with canceling claim 2 and its features are incorporated into claim 1.

*10 Claims 1 and 21-42 rejection under judicially created doctrine of obviousness-type double patenting over U.S. Patent No. 7,075,228*

The cited reference, U.S. Patent No. 7,045,228, does not qualify as a reference of double patenting rejection to the present invention. The present invention and U.S. Patent No. 7,075,228 do not have same inventive entity, common inventor, or common assignee. They are not currently commonly owned. Therefore, the cited reference does not qualify as a ground for double patenting rejection to the present application.

The office action text referred to U.S. Patent No. 70045228, not to 7,045,228. This is believed to be a typing error since the form PTO-892 referred to U.S. Patent No. 7,045,228.

Moreover, the cited reference also does not qualify as a prior art reference under 35 U.S.C 102 or 103. The cited patent was filed on March 1, 2005 claiming priority to a Japanese Patent Application No. P.2004-062652, whose priority date is March 5, 2004. The

cited patent was disclosed to the public as a patent application on September 8, 2005 as US 2005/0196648 by the Patent and Trademark Office and on September 15, 2005 as JP 2005-251331 by the Japan Patent Office. However the present application was actually filed in the Patent and Trademark Office on March 1, 2004. Therefore, the cited patent should not be cited as a prior art reference to the present invention, even under 35 U.S.C. 102(e).

It is also clear that the present invention does not interfere with claims 1-11 of U.S. Patent No. 7,045,228, because the present invention is patentably distinct over claims 1-11 of the U.S. Patent No. 7,075,228. As the Examiner pointed out, U.S. Patent No. 7,045,228 claims a structure where an apex of a biggest convexity of the support does not protrude from a line connecting an apex of a biggest convexity of the coating layer and an apex of a biggest convexity of the back layer. However, claims 1-11 of U.S. Patent No. 7,045,228 do not recite the feature of the present invention, *i.e.*, the structure where the cut surface on the side of the lower blade includes 40% to 65% of the broken region formed by cutting the magnetic tape by the breaking force.

#### IV. Amendment to the specification

Lastly, we would like to explain the amendment to the specification. We note that polyethylene telephthalate found in the specification in conjunction with Working Example 1 was a typing or clerical error and should be read as polyethylene naphthalate as presented above. This amendment is not introducing new matter considering the translation from the original foreign patent application, Japanese Application No. 2003-059494, to which the present application claims priority under Paris Convention, Article 4, or 35 U.S.C. 119 is correct. This original Japanese application, now being published by the Japan Patent Office as JP 2004-272968 A, discloses “a wide support 2, with 500 mm in width and 6.1 micrometer in thickness made of polyethylene naphthalate” in Japanese language at paragraph 0055 which corresponds to the amended paragraph in the specification. The word “naphthalate” can also be found by consulting machine translation of JP 2004-272968 A provided by NCIP (National Center for Intellectual Property and Training), an affiliate of the Japan Patent Office, as follows:

“[0055]

Example 1

By width of face of 500mm, while forming the under coat layer 3 with a thickness of 2 micrometers and the magnetic-recording layer 4 with a thickness of 0.15 micrometers in one field of the double-width base material 2 of the product made from polyethylenenaphthalate with a thickness of 6.1 micrometers, the back coat layer 5 with a thickness of 0.5 micrometers was formed in the field of another side of a base material 2, and the double-width magnetic tape was manufactured.” (emphasis added)

Please note that the above amendment to the specification is to remove potential problem of the typing errors, not to address any specific rejection or objection raised in the outstanding Office Action.

V. Conclusion

The applicant believes that all of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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